

CLAIMS

1. Guide rail of compound type made like a railway rail or similar and intended for guiding interaction with a wheel of a unit travelling along the rail, comprising a long outer rail
5 (4) made of sheet metal exhibiting the shape of a longitudinal open channel with defined inside (9) and outside (10), a long base rail (5) exhibiting a foot (1) for mounting the rail to a surface, a web (2) extending from the foot supporting a main part (3), which, in comparison to the web, is thicker and serves as a receptacle (11) for receiving and supporting the outer rail, whereby the outer rail has an outer profile that has been chosen to provide a guiding
10 interaction with the wheel, c h a r a c t e r i s e d in that the inside (9) of the outer rail (4) and the receptacle section (11) of the base rail exhibit corresponding sections or sections that have been chosen relative to each other so that the outer rail fits onto the receptacle section, that the outer rail (4) has a yield point exceeding that of the base rail (5) and that both the joined parts are fixed adhesively relative to each other through for example welding or gluing,
15 preferably with a conductive glue.

2. Guide rail according to claim 1, whereby the outer rail (4) seen in cross section is essentially U-shaped exhibiting a bottom part (7) and two adjoining and principally parallel and opposing side edge sections (7, 7').
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3. Guide rail according to claim 1, whereby the outer rail (4) and base rail (5) respectively are joined to each other with a combination of glue and mechanical snap fastening and a certain degree of application to the base rail through the effect of a means of snap fastening (8, 8') formed in the outer rail.
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4. Guide rail according to claim 3, whereby the outer rail (4) seen in cross section is essentially C-shaped exhibiting a bottom section (7) and two adjoining side edge sections (7, 7'), the free end side edges (8, 8') of which are opposing to form a means of snap fastening and intended when the outer rail is fitted to snap in place on a transitional section (12) that
30 viewed from the main section (3) tapers off towards the web (2).

5. Guide rail according to claim 4, whereby the outer rail (4) on its concave inside has longitudinal material contractions (13) serving as guide notches.

35 6. Guide rail according to claim 5, whereby the material contractions (13) are located in the transitional area between the bottom section (7) and its adjoining side edge sections (7, 7').

7. Guide rail according to claim 5, whereby the material contractions (13) are located in any one of the side edge sections (7, 7') adjoining the outer rail.

5 8. Guide rail according to claim 7, whereby the material contractions (13) arranged in any of the side edge sections (7, 7') are positioned in series after each other like grooves.

10 9. The guide rail according to any one of the claims 1 - 8, whereby a layer of elastomeric material (15) is arranged between the outer rail (4) and the base rail (5) in which the said parts are joined together through gluing.

10. Guide rail in accordance with claim 9, whereby the elastomeric filler layer (15) comprises a polymeric material.

15 11. Guide rail according to any one of the claims 1 - 10, whereby the outer rail (4) and base rail (5) respectively are manufactured in different types of material.

20 12. Guide rail according to any one of the claims 1 -11, whereby the outer rail (4) is manufactured in a hardened material.

13. Guide rail according to claim 12, whereby the hardened material contains steel that has been alloyed with additives of boron, called boron steel.

25 14. Guide rail according to any one of the claims 1 -13, whereby the outer rail (4) comprises a sheet metal material of thickness in the interval 2 – 10 mm, preferably 7 – 8 mm.

30 15. Guide rail according to any one of the claims 1 -14, whereby the outer rail (4) exhibits a yield limit that at least attains values in the interval 900 - 1300 MPa, preferably 1200 MPa.

16. Guide rail according to any one of the claims 1 -15, whereby the outer rail (4) is manufactured by rollforming sheet metal with subsequent hardening.

35 17. Guide rail according to any one of the claims 1 -16, whereby the base rail (5) is manufactured through rolling.

18. Guide rail according to any one of the claims 1 -15, whereby the outer rail (4) is manufactured through rolling.

5 19. Guide rail according to any one of the claims 1 -16, whereby the base rail (5) is manufactured of a non-metallic material such as concrete or a composite material of synthetic resin type.

10 20. Method of manufacturing a guide rail of compound type designed as a railway rail and intended for guided interaction with a wheel of a unit travelling along the rail, in which the method comprises the following operations:

that by profile shaping a first sheet metal blank, a long channel-shaped outer rail (4) is formed with defined concave inside (9) and convex outside (10), the shape of the outside of which is chosen to provide a guided interaction with the wheel,

15 that a long base rail (5) is formed from a second blank exhibiting a foot (1) for fitting the rail to a surface, a web (2) that extends from the foot and supports a main section (3), which in comparison to the web is thicker and serves as a receptacle (11) of suitable shape to support the outer rail,

that the outer rail (4) is given a higher yield limit through hardening,

20 that the outer rail (4) is positioned on the receptacle (11) formed on the base rail (5) and

that the outer rail (4) is fixed on the receptacle (11) formed on the base rail (5).

25 21. Method according to claim 20, whereby the outer rail (4) is given such a shape in relation to the base rail (5) that the outer rail can be snapped onto the receptacle section (11) of the base rail.

22. Method according to claim 20 or 21, whereby the outer rail (4) on its inside has longitudinal material contractions (16) serving as guide notches.

30 23. Method according to any one of the claims 20 -22, whereby a layer of elastomeric material (15) is arranged between the outer rail (4) and the receptacle section (11) of the base rail (5) and that the outer rail, base rail and filler layer are joined together through gluing.

35 24. Method according to any one of the claims 20 - 23, whereby the outer rail (4) is manufactured by rollforming and passing between two rollers in a section rolling mill.

25. Method according to claim 24, whereby the outer rail (4) after rollforming is hardened through heating the material to a suitable austenitising temperature and then cooling it at a rate that is suitable for the material.

5 26. Method according to any one of the claims 24 -25, whereby the outer rail (4) is manufactured by rollforming a sheet metal material that has a yield limit below 340 MPa.

 27. Method according to any one of the claims 20 -26, whereby the outer rail (4) after shaping is hardened so it exhibits a yield limit that at least attains values in the interval
10 900 - 1300 MPa, preferably 1200 MPa.

 28. Method according to any one of the claims 20 -27, whereby the outer rail (4) is shaped through rolling.

15 29. Method according to any one of the claims 20 -28, whereby the hardened outer rail (4) is made tougher through annealing.

 30. Method according to any one of the claims 20 - 29, whereby the base rail (5) is manufactured from an existing or used railway rail of common type in which the receptacle
20 section (12) is made by machine cutting the rail.

 31. Method according to any one of the claims 20 -29, whereby the base rail (5) is manufactured of a non-metallic material such as reinforced concrete or a reinforced composite material of synthetic resin type.

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